Volume 10, 1993

LIST OF CONTENTS
AND
AUTHOR INDEX

TELEMATICS and INFORMATICS

An International Journal

Editor-in-Chief:
INDU B. SINGH
Associate Editor:
JAY LIEBOWITZ

PERGAMON PRESS New York/Oxford/Seoul/Tokyo

TELEMATICS and INFORMATICS
An International Journal on Telecommunications & Information Technology

Featuring articles about
- Applied telecommunications and information technology
- Information resource management
- Socio-economic implication
- International issues in communication
- Information policy and legislation

Editorial Office: Editor-in-Chief, *Telematics and Informatics*, 14500 Avion Parkway, Suite 100, Chantilly, VA 22021
Telephone: (703) 631-6800
Fax: (703) 631-6804

Production Editor: Melissa Bogen, Pergamon Press, Tarrytown, New York.

Publishing, Subscription and Advertising Offices: Pergamon Press Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA, E-mail Address: ESUK.USA@ELSEVIER.COM; and Pergamon Press Ltd., Headington Hill Hall, Oxford OX3 0BW, England.

Published Quarterly: Annual Institutional Subscription Rates 1994: North, Central, and South America, U.S. $395.00, Rest of World £255.00. Associated Personal Subscription Rates are available on request for those whose institutions are library subscribers. Sterling prices exclude VAT. Non-VAT registered customers in the European Community will be charged the appropriate VAT in addition to the price listed. Prices include postage and insurance and are subject to change without notice.

EDITOR-IN-CHIEF
Indu B. Singh, Ph.D., *President, James Martin Strategy 14500 Avion Parkway Suite 100, Chantilly, VA 22021*

LEGISLATIVE AND POLICY FOCUS EDITORS
Robert E. Weigend, *Senior Editor Schnader, Harrison, Segal & Lewis 1111 19th Street, NW, Suite 1000, Washington DC 20036*

Janet Zeide, Esquire
Washington DC

ASSISTANT EDITOR
Michelle Didier

EDITORIAL ADVISORY BOARD

Jerry Armes
Aurastar, Dallas TX

Henry Baumann
National Association of Broadcasters, Washington DC

Bertram C. Blevis
Canadian Astronautics Limited, Ottawa, Canada

John H. Carson
George Washington University, Washington DC

Keith Clarke
BT Centre, London, England

Raymond Crowell
COMSAT Corp., Washington DC

Stephen E. Doyle
Aerojet Propulsion, Sacramento CA

Hendrick Edelman
Rutgers University, New Brunswick NJ

John Eger
Worldwide Media Group, Inc., Stamford CT

Ernest H. Forman
George Washington University, Washington DC

Jarice Hanson
University of Massachusetts, Amherst MA

Erwin G. Krasnow
Verner, Liipfert, Bernhard, McPherson & Alexander, Washington DC

ASSOCIATE EDITOR
Jay Liebowitz, D.Sc., *Professor, Dept. of Management Science, School of Government and Business Administration, George Washington University, Washington DC 20052*

ASSOCIATE EDITOR (EUROPE)
Jan Servaes, Ph.D., *Institute of Communication, Catholic University of Nijmegen, P.O. Box 9108, 6500 HK Nijmegen, The Netherlands*

ASSOCIATE EDITOR (FAR EAST)
Toshio Kosuge, Ph.D., *University of Electro-Communication, Tokyo, Japan*

Harold Liebowitz
George Washington University, Washington DC

Rao Machiraju
Apple Computer, Inc., Cupertino CA

Hamid Mowlana
American University, Washington DC

Karl-Heinz Neumann
Research Institute for Telecommunications, Bad Honnef, Germany

John Oeffinger
Texas Hospital Education and Research Foundation, Austin TX

Joseph Pelton
University of Colorado, Boulder CO

Louis Pouzin
Centre National d'Etudes des Telecommunications, Paris, France

James L. Rash
NASA Goddard Space Flight Center, Greenbelt, MD

Saeed A. Salman
Ajman University, United Arab Emirates

Hisham El Sherif
American University, Cairo, Egypt

Delbert D. Smith
Schnader, Harrison, Segal & Lewis, Washington DC

Anthony Smith
Magdalen College, Oxford, England

Christopher H. Sterling
George Washington University, Washington DC

Cor Swart
James Martin Strategy, The Netherlands

Yasumasa Tanaka
Gakushuin University, Tokyo, Japan

TELEMATICS and INFORMATICS Vol. 10, No. 4, III–VIII, 1993
Copyright © 1993 Pergamon Press Ltd. Printed in the USA
0736-5853/93 $6.00 + .00

LIST OF CONTENTS

Volume 10, Number 1 WINTER 1993

CONTENTS

Jootae Kim **David (Chi-Chung) Yen**	1	Implementing Competitive Telecommunications Infrastructure
An Vranckx	15	Assessing an Interest Constellation: Informatics and Telecommunications Transfer Support in International Cooperation on Services Development
Elena Barricella **Traci Little** **Astrid Raczynski** **Heather Shute**	25	Malaysia: A Privatization Case Study
Richard J. Barber	35	Doing Business in the Far East
Jagdish N. Sheth **Michael Erony**	41	Overcoming the Barriers to Global Economic Development and the International Flow of People, Products, and Resources: Strategic Recommendations
David J. Atkin	51	Adoption of Cable Amidst a Multimedia Environment
Avi Rushinek **Sara Rushinek**	59	Terminal Emulation Controllers, Duplex, Communication Protocols, Multisession Networks, Up/down-Load, Copy Protection, Baud-Rate, and Windows Compatibility: Profit Measures and Product Features

Legislative and Policy Focus

Erwin G. Krasnow
Jacqueline R. Kinney 75 Policy Developments Regarding Competition in the Video Marketplace

83 ***NTIS Section***

88 ***Announcement***

Volume 10, Number 2 SPRING 1993

CONTENTS

Stu Westin
Norbert Mundorf
Nikhilesh Dholakia 89 Exploring the Use of Computer-Mediated Communication: A Simulation Approach

Anastassios Gentzoglanis 103 New Information Technologies and the Service Economy: The Case of Canada

Charles W. Steinfield
Laurence Caby 119 Strategic Organizational Applications of Videotex Among Varying Network Configurations

M. Gell
I. Adjali 131 Markets in Open Telecommunication Service Systems

Jay Liebowitz 149 Promising Applications of Multimedia

Donald F. Parsons 157 The Case for Including Medical Informatics in Medical Nursing, and Public Health School Curricula

171 ***NTIS Section***

175 ***Call for Papers***

Volume 10, Number 3 SUMMER 1993

CONTENTS
SPECIAL ISSUE
NEURAL NETWORKS AND ARTIFICIAL INTELLIGENCE TECHNOLOGIES FOR SPACE APPLICATIONS

James L. Rash	177	Guest Editor's Note
		Neural Networks
O. Bock **G. M. T. D'Eleuterio** **J. Lipitkas** **J. J. Grodski**	179	Parametric Motion Control of Robotic Arms: A Biologically Based Approach Using Neural Networks
Samir R. Chettri **Robert F. Cromp**	187	Probabilistic Neural Network Architecture for High-Speed Classification of Remotely Sensed Imagery
Y. M. Fleming Lure **Norman C. Grody** **Y. S. Peter Chiou** **H. Y. Michael Yeh**	199	Data Fusion with Artificial Neural Networks for Classification of Earth Surface from Microwave Satellite Measurements
Brian A. Telfer **Harold H. Szu** **Richard K. Kiang**	209	Classifying Multispectral Data by Neural Networks
		Monitoring/Control
Sven G. Holmquist **Prakash Jayaram** **Ben H. Jansen**	223	Architecture for Object-Oriented Intelligent Control of Power Systems in Space
Craig A. Lindley	231	Autonomous Satellite Architecture Integrating Deliberative Reasoning and Behavioural Intelligence
		Knowledge Engineering
Sidney Bailin **Frank Paterra** **Scott Henderson** **Walt Truszkowski**	251	Model-Based Reasoning for System and Software Engineering: The Knowledge from Pictures (KFP) Environment

Richard Hull
Fernando Gomez 265 Inferring Heuristic Classification Hierarchies from Natural Language Input

Intelligent Data Management

Sidney Bailin
Scott Henderson
Walt Truszkowski 283 Application of Machine Learning to the Organization of Institutional Software Repositories

R. D. Semmel
D. P. Silberberg 301 Extended Entity-Relationship Model for Automatic Query Generation

319 ***Call for Papers***

Volume 10, Number 4 FALL 1993

CONTENTS

Jan Servaes 321 Beyond "Europe 1992": Communication and Cultural Identity in Small Nation States

Thomas L. Jacobson
Scott Zimpfer 345 Noncommercial Computer Networks and National Development

Phyllis Bernt
Hans Kruse
David Landsbergen 359 The Impact of Alternative Technologies on Universal Service and Competition in the Local Loop

Linda K. Fuller 379 If Interactive Video Is the Goal, What Is the Best Educational Means to Achieving It?

Matthias W. Stoetzer 391 Electronic Messaging Services in Germany: A Survey

PCN Update

Ted Y. Joseph 397 Personal Communication Services

I ***List of Contents and Author Index Volume 10, 1993***

Author Index

Adjali, I., 131
Atkin, D.J., 51

Bailin, S., 251, 283
Barber, R.J., 35
Barricella, E., 25
Bernt, P., 359
Bock, O., 179

Caby, L., 119
Chettri, S.R., 187
Chiou, Y.S.P., 199
Cromp, R.F., 187

D'Eleuterio, G.M.T., 179
Dholakia, N., 89

Erony, M., 41

Fuller, L.K., 379

Gell, M., 131
Gentzoglanis, A., 103
Gomez, F., 265
Grodski, J.J., 179
Grody, N.C., 199

Henderson, S., 251, 283
Holmquist, S.G., 223
Hull, R., 265

Jacobson, T.L., 345
Jansen, B.H., 223
Jayaram, P., 223
Joseph, T.Y., 397

Kiang, R.K., 209
Kim, J., 1
Kinney, J.R., 75
Krasnow, E.G., 75
Kruse, H., 359

Landsbergen, D., 359
Liebowitz, J., 149
Lindley, C.A., 231
Lipitkas, J., 179
Little, T., 25
Lure, Y.M.F., 199

Mundorf, N., 89

Parsons, D.F., 157
Paterra, F., 251

Raczynski, A., 25
Rash, J.L., 177
Rushinek, A., 59
Rushinek, S., 59

Semmel, R.D., 301
Servaes, J., 321
Sheth, J.N., 41
Shute, H., 25
Silberberg, D.P., 301
Steinfield, C.W., 119
Stoetzer, M.W., 391
Szu, H.H., 209

Telfer, B.A., 209
Truszkowski, W., 251, 283

Vranckx, A., 15

Westin, S., 89

Yeh, H.Y.M., 199
Yen, D. (C.-C.), 1

Zimpfer, 345